

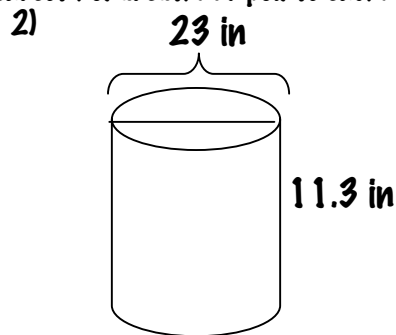
Name \_\_\_\_\_ Date \_\_\_\_\_

## Module 5 Practice Test

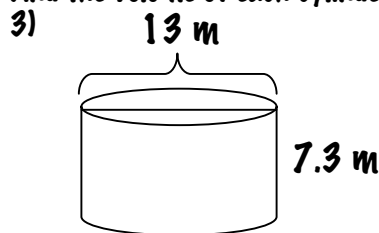
### 5:1:1 & 5:1:2 Surface Area and Volume

Find the surface area of each cylinder. Round answers to the nearest hundredth. (4 points each)

1)  $r = 5 \text{ cm}$   
 $h = 11 \text{ cm}$



Find the volume of each cylinder. Round answers to the nearest hundredth. (3 points each)



4)  $r = 6 \text{ ft}$   
 $h = 4 \text{ ft}$

5) In pottery class Megan made a 15-inch high cylindrical vase. Its base has a radius of 3 inches. She wants to wrap the vase as a special present for her favorite math teacher. How many square inches of wrapping paper will Megan have to use to wrap the vase? Round to the nearest hundredth. (4 points)

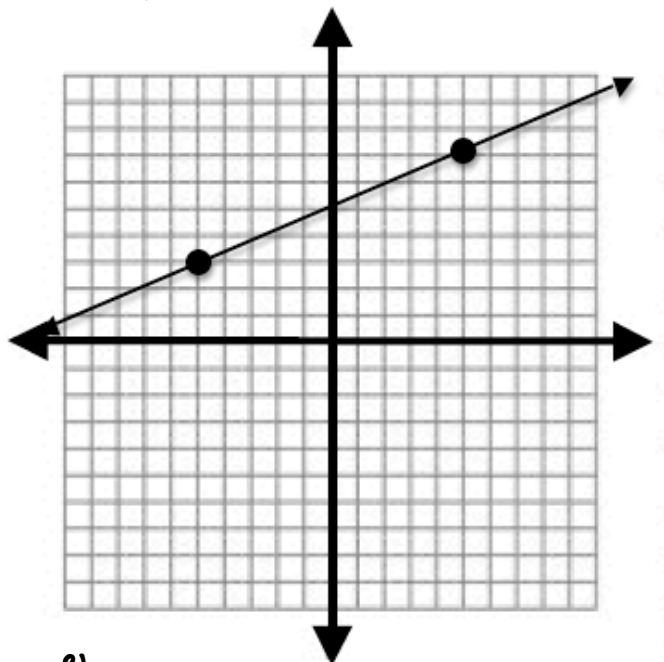
### 5:2:2 Slope, Y-Intercept, and Equations

For each line, find the slope, the y-intercept, and an equation of the line. (3 points each)

6)  $m =$

$b =$

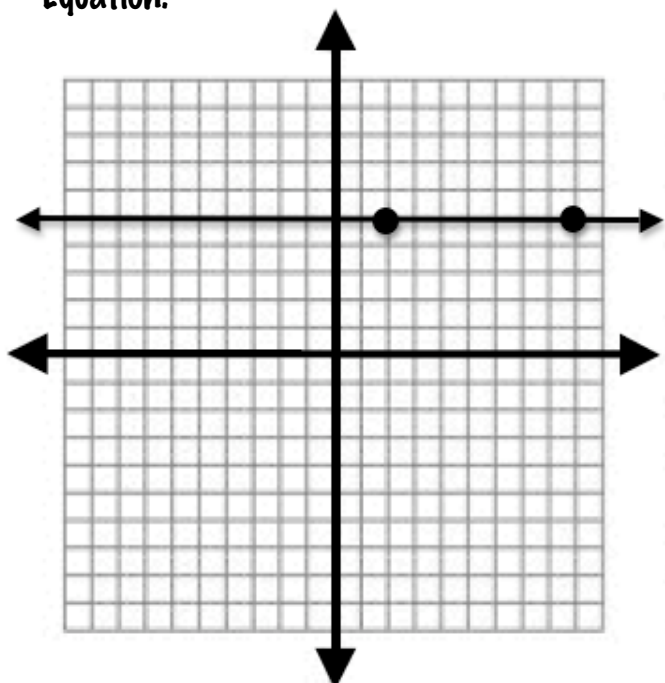
Equation:



8)  $m =$

$b =$

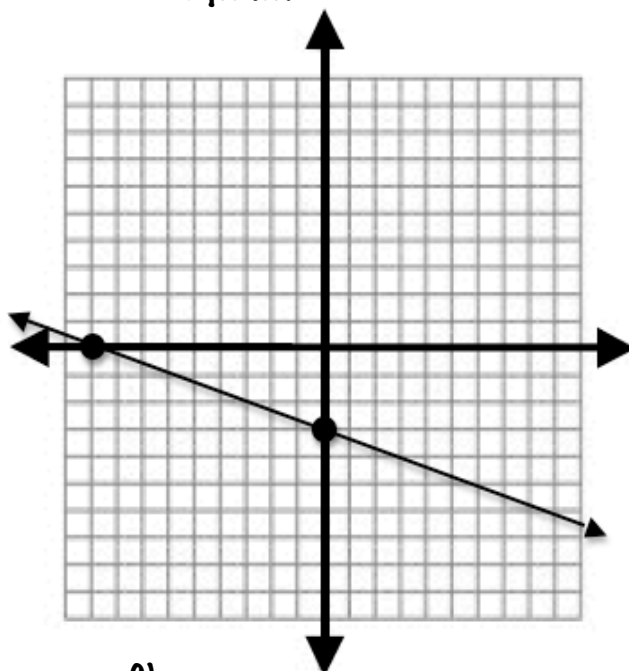
Equation:



7)  $m =$

$b =$

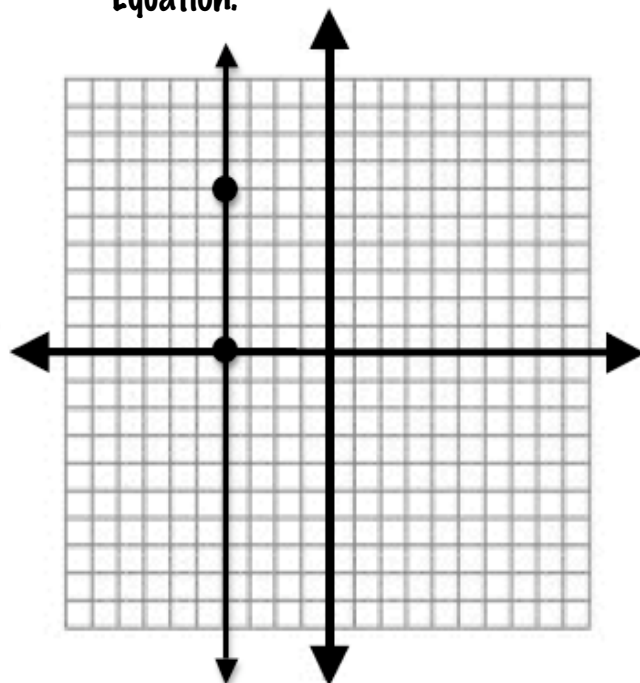
Equation:



9)  $m =$

$b =$

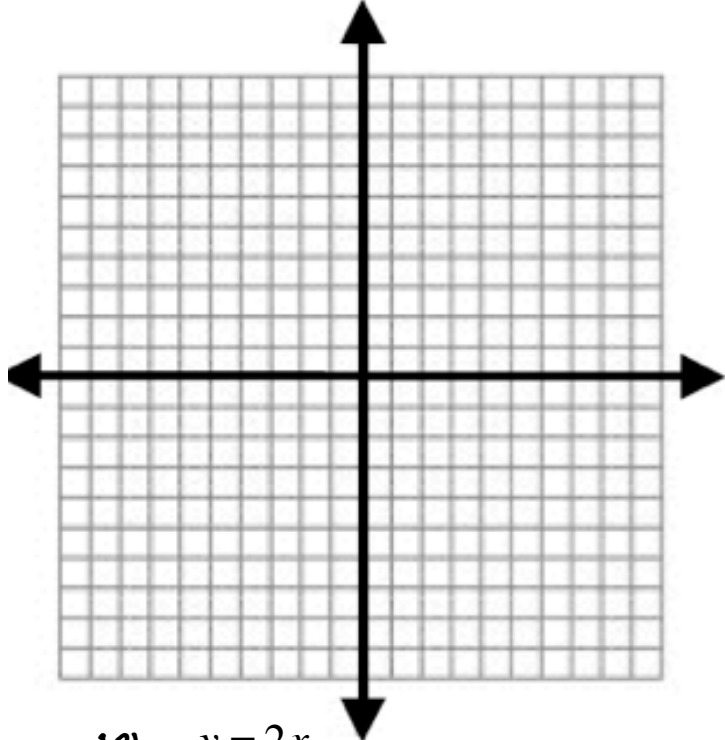
Equation:



Graph the following equations in slope-intercept form. Label the slope and y-intercept. (3 points each)

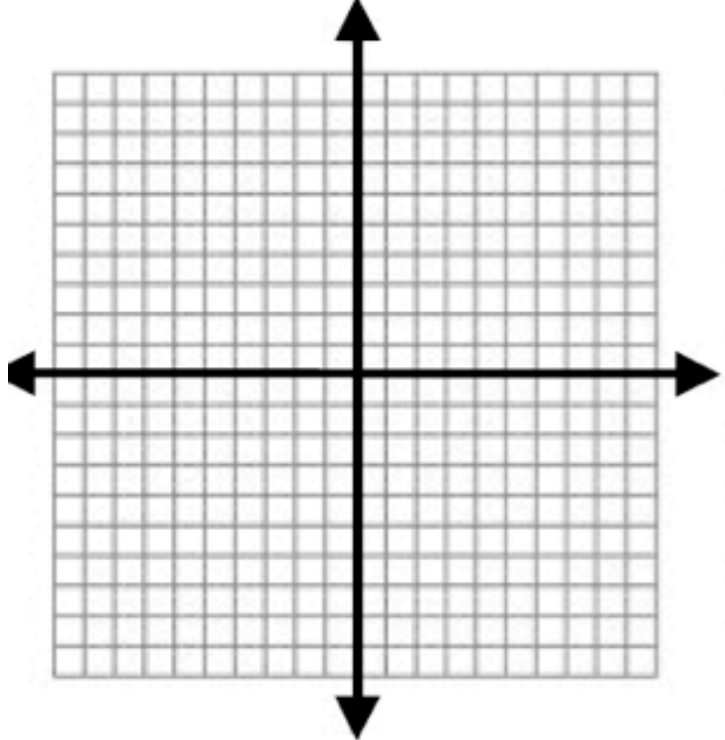
10)  $y = 5x + 1$   $m =$

$b =$



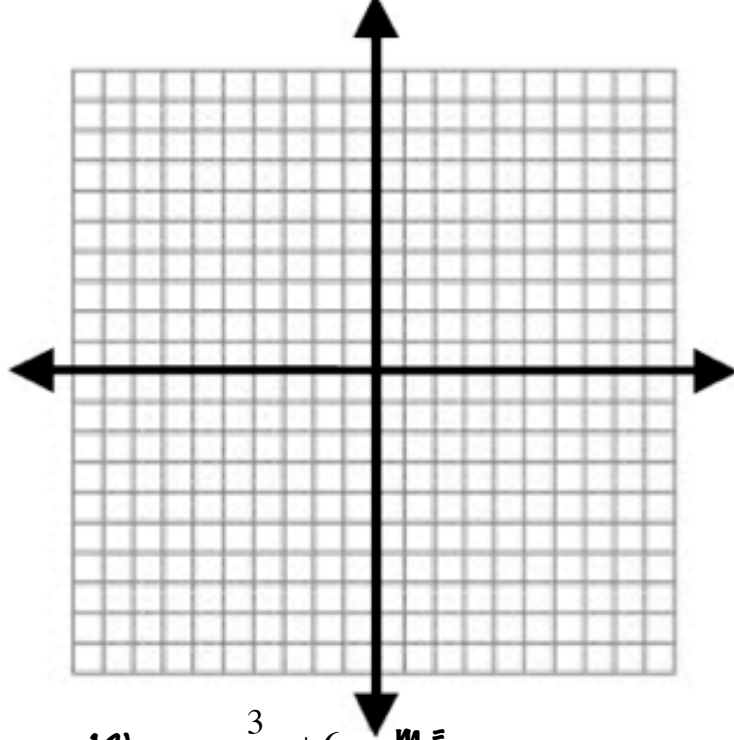
12)  $y = 2x$   $m =$

$b =$



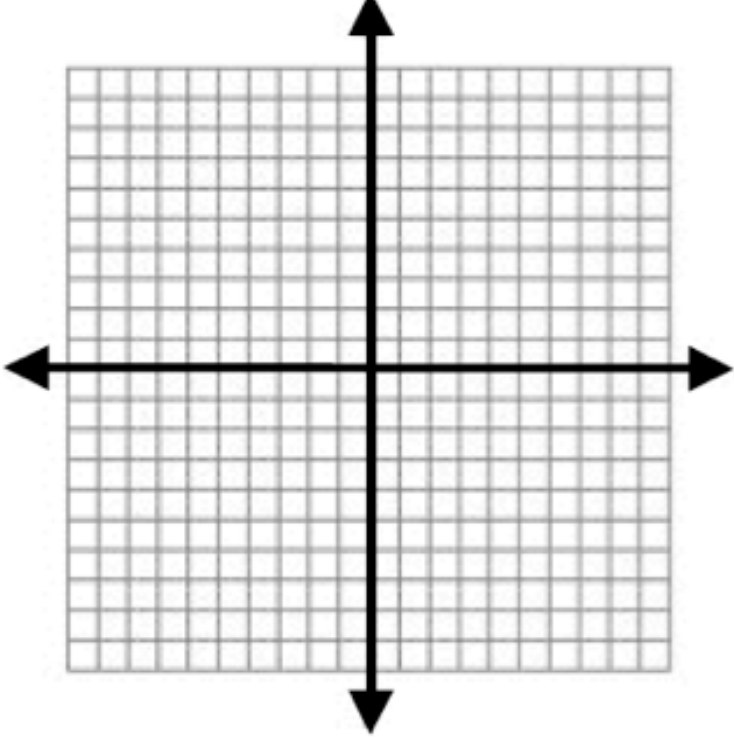
11)  $y = -\frac{2}{3}x - 3$   $m =$

$b =$



13)  $y = \frac{3}{7}x + 6$   $m =$

$b =$

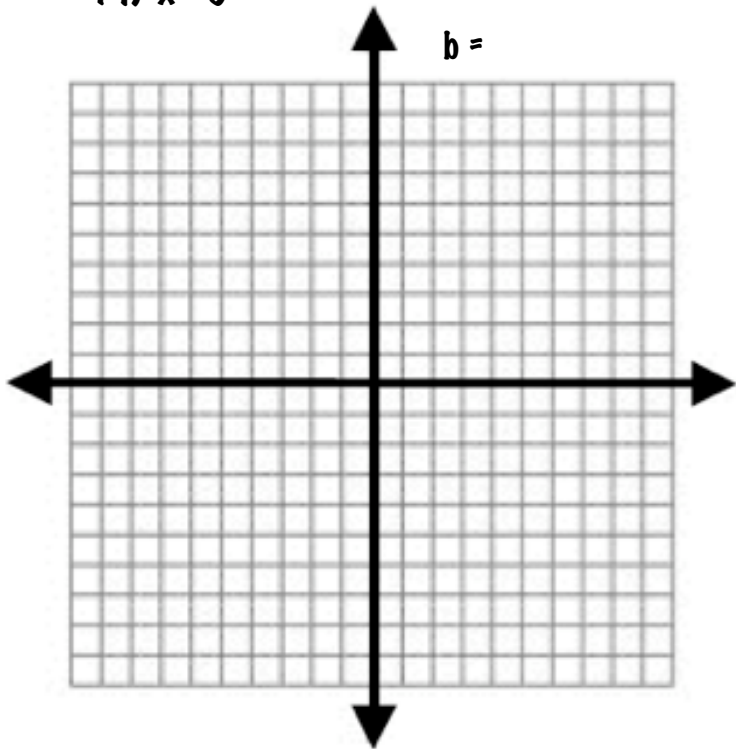


Graph the following equations in slope-intercept form. Label the slope and y-intercept. (3 points each)

14)  $x = 5$

$m =$

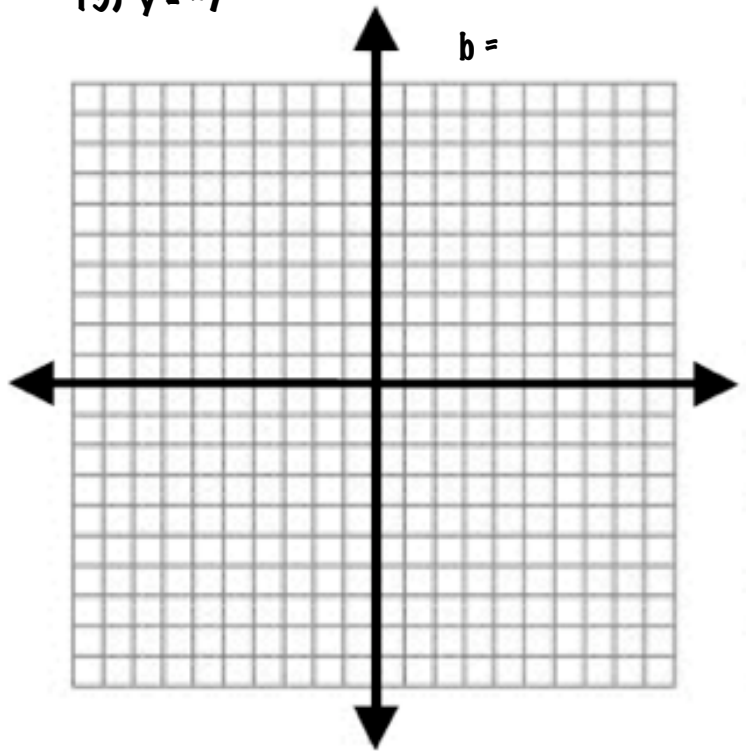
$b =$



15)  $y = -7$

$m =$

$b =$



### 5:3:1 Rules of Exponents

Write each product or quotient as a single power. (1 point each)

16)  $n^{23} \cdot n^{48}$

17)  $\frac{7^{15}}{7^9}$

18)  $4^2 \cdot 4^4$

19)  $\frac{3^{23}}{3^{19}}$

20)  $\frac{c^4 \cdot c^{12}}{c^8}$

21)  $\frac{t^{12} \cdot u^{24}}{t \cdot u^9}$

22)  $r^{-4}$

23)  $6x^{-3}$

24)  $12^0$

25)  $2^3 m^{-6} n^5$

### 5:3:2 Scientific Notation

Write each number in decimal notation. (1 point each)

26)  $5.073 \cdot 10^3$

27)  $9.04 \cdot 10^{-7}$

28)  $4.117 \cdot 10^{-5}$

Write each number in scientific notation. (2 points each)

29) 0.0036

30) 21,789

31) 0.0000029705

#### 5:5:1 Counting and Permutations

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32) The number of permutations of the letters in the word: WINTER (2 points)

33) A sandwich shop offers two bread choices: white or whole wheat, three cheese choices: American, Swiss, mozzarella, and 6 veggie choices: lettuce, tomato, onion, green pepper, mushrooms and spinach. How many different kinds of sandwiches can be made? (2 points)

34) How many different kinds of phone numbers can be created with 7 digits? (2 points)

#### 5:5:2 Combinations

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35) Mrs. Trendel is choosing 2 students from Mrs. Bachofen's resource to organize papers. How many different pairs can be made if Mrs. Bachofen has a resource of 6? (2 points)

36) A local pizza parlor, 5 employees work on Saturday night: Matt, Nick, Ellie, Hailey, and Jorjea. Usually, 2 employees are needed to take telephone orders on Saturday night. List all possible combinations employees can be assigned to answer phones. (2 points)

#### 5:6:1 Probability and Counting

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A bank requires customers to have a 4-digit pin (using numbers 0 – 9) with their ATM card.

37) What is the probability that all the numbers of a pin are 2, 4, 6, or 8? (2 points)

38) What is the probability that the first number starts with zero? (2 points)

39) What is the probability that the last two numbers are the same? (2 points)